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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,831	02/02/2005	Osamu Moriwaki	5259-046/NP	8419
27572 7590 11/15/2007 HARNESS, DICKEY & PIERCE, P.L.C.			EXAMINER	
P.O. BOX 828			BELLO, AGUSTIN	
BLOOMFIELD HILLS, MI 48303			ART UNIT	PAPER NUMBER
			2613	
			MAIL DATE	DELIVERY MODE
			11/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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0	Application No.	Applicant(s)
Supplemental	10/522,831	MORIWAKI ET AL.
Notice of Allowability	Examiner	Art Unit
	Agustin Bello	2613
The MAILING DATE of this communication appear All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this apport or other appropriate communication GHTS. This application is subject to	plication. If not included will be mailed in due course. THIS
1. This communication is responsive to the application filed 2	<u>/2/05</u> .	
2. The allowed claim(s) is/are <u>1-12</u> .		
3. Acknowledgment is made of a claim for foreign priority una) All b) Some* c) None of the: 1. Certified copies of the priority documents have 2. Certified copies of the priority documents have 3. Copies of the certified copies of the priority documents have International Bureau (PCT Rule 17.2(a)). * Certified copies not received: Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. 4. A SUBSTITUTE OATH OR DECLARATION must be subministed in Substitute OATH OR DECLARATION (PTO-152) which give 5. CORRECTED DRAWINGS (as "replacement sheets") must (a) including changes required by the Notice of Draftspers 1) hereto or 2) to Paper No./Mail Date (b) including changes required by the attached Examiner's Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in the 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPOSIT OF and/or INFORMATION about the depose attached Examiner's comment regarding REQUIREMENT In 1 DEPO	been received. been received in Application Nocuments have been received in this of this communication to file a reply ENT of this application. itted. Note the attached EXAMINER is reason(s) why the oath or declarate the submitted. on's Patent Drawing Review (PTO-18 Amendment / Comment or in the Comment of the drawing he header according to 37 CFR 1.121(content of BIOLOGICAL MATERIAL resumment).	complying with the requirements 'S AMENDMENT or NOTICE OF tion is deficient. 948) attached Office action of the back) of d). must be submitted. Note the
Attachment(s) 1. Notice of References Cited (PTO-892) 2. Notice of Draftperson's Patent Drawing Review (PTO-948) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 4. Examiner's Comment Regarding Requirement for Deposit of Biological Material	5. ☐ Notice of Informal P 6. ☐ Interview Summary Paper No./Mail Dat 7. ☐ Examiner's Amendn 8. ☑ Examiner's Stateme 9. ☐ Other	(PTO-413), le

AGUSTIN BELLO PRIMARY EXAMINER
Part of Paper No./Mail Date 20071112

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DETAILED ACTION

Allowable Subject Matter

- 1. Claims 1-13 are allowed.
- 2. The following is an examiner's statement of reasons for allowance: the prior art fails to specifically teach or suggest a plurality of communication nodes; a wavelength-routing device which establishes communication between the communication nodes based upon route control according to the wavelength of an optical signal; and an optical transmission line which forms a communication path which connects the communication, nodes and the wavelength-routing device, wherein the wavelength-routing device comprises: N device input ports, where N being an integer greater than or equal to 2, which are connected via the optical transmission line to the communication nodes; N device output ports which are connected via the optical transmission line to the communication nodes; a plurality of wavelength-band demultiplexers which are provided to each of the N device input ports, and each has a single input port and a plurality of output ports, and the input port is connected to one of the device input ports; a plurality of wavelength-band multiplexers which are provided to each of the N device output ports, and each has a plurality of input ports and a single output port, and the output port is connected to one of the device output ports; and R KxK arrayed-waveguide gratings, where R being an integer greater than or equal to J and J being an integer greater than or equal to 2, which have K input ports and K output ports, where K being an integer that satisfies K = N, which have wavelengthrouting characteristics in which optical signals having different wavelengths which are inputted to one input port are output at different output ports depending on the wavelengths of the inputted optical signals and in which optical signals having different wavelengths which are

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outputted from one output port are optical signals which have been inputted to different input ports, and . wherein the wavelength-band demultiplexers comprise a means which demultiplexes by wavelength band a wavelength division multiplexed Signal in which a respective predetermined number of wavelengths have been wavelength division multiplexed for each wavelength band which is transmitted from the communication nodes, where wavelength band = central wavelength $\lambda Bm \pm \text{wavelength band width } \lambda m$, with $\lambda Bm + \Delta \lambda m = \lambda Bm + l - \Delta \lambda m + l$, where 1 = m = R-1, with m being an integer, and outputs the results at different output ports, the wavelength-band multiplexers comprise a means which multiplexes optical signals which have been inputted from the plurality of input ports for each wavelength band and which outputs a wavelength division multiplexed signal in which a predetermined number of wavelengths have been wavelength division multiplexed at the output port, the KxK arrayed-waveguide gratings are provided with a wavelength-routing characteristic for each wavelength band of central wavelength $\lambda B1 \pm$ wavelength band width $\Delta\lambda 1$, central wavelength $\lambda B2 \pm$ wavelength band width $\Delta\lambda 2$ ($\lambda B1 + \Delta\lambda 1 < \lambda B2 - \Delta\lambda 2$), central wavelength $\lambda B3 \pm$ wavelength band width $\Delta\lambda 3$ $(\lambda B2 + \Delta \lambda 2 < \Delta \lambda B3 - \Delta \lambda 3)$, ..., central wavelength $\lambda BR \pm$ wavelength band width $\Delta \lambda R$ ($\lambda BR-1 +$ $\Delta \lambda R - 1 < \lambda BR - \Delta \lambda R$), the output ports of the wavelength-band demultiplexers which are respectively connected to the N device input ports are one to one connected to the input ports of the KxK arrayed-waveguide gratings which have wavelength-routing characteristics at the wavelength bands of the optical signals which are outputted from the output ports of the wavelength-band demultiplexers, and the output ports of the KxK arrayed-waveguide gratings are one to one connected to the input ports of any one of the plurality of wavelength band multiplexers which can multiplex optical signals of wavelengths which belong to the wavelength

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bands of the optical signals which are outputted from the output ports of the KxK arrayed-waveguide gratings..

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Agustin Bello Primary Examiner Art Unit 2613